

## **ABSTRACT**

### **Role of C - reactive protein In Predicting Acute Severe Pancreatitis**

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#### *Introduction*

Acute Pancreatitis is a disease of unpredictable outcome; early intervention can prevent the development of acute severe pancreatitis which develops in 20 to 30% of patients with Acute Pancreatitis. The progression of the disease and the development of complications are mainly due to the release of proinflammatory cytokines leading to third space volume loss. C –reactive protein ( CRP) being an acute phase reactant is elevated in the ensuing inflammation of the pancreas , this elevation when above 150 mg/L has been noted to be a predictive marker of the development of acute severe pancreatitis .The aim of the study was determine the role of C –reactive protein in predicting acute severe pancreatitis, the secondary aims were to determine the role of Bedside Index for Severity in Acute Pancreatitis (BISAP), Harmless Acute Pancreatitis Score(HAPS)and Systemic Inflammatory Response Syndrome (SIRS) scores in predicting Acute severe pancreatitis .

#### *Methods*

This is an observational study; we enrolled 64 consecutive patients of acute pancreatitis from the period of May 2013 to February 2014. On admission pancreatic severity scores were determined using the BISAP, HAPS and SIRS scores. After 48 hours of admission blood levels of CRP were measured, a CRP level of >150mg/L was taken as a cutoff to predict acute severe pancreatitis. The CRP levels and the pancreatitis predicting scores were then evaluated against Computerized Tomography of the abdomen taken 72 hours after admission to predict acute severe pancreatitis.

## *Results*

Acute severe pancreatitis according to CT was found in 23 patients in the study population of 64. CRP predicted the presence of acute severe pancreatitis in 15 out of the 23 patients with a specificity of 85.2%. CRP had a significant correlation in predicting acute severe pancreatitis (p value=0.0002). BISAP, HAPS and SIRS scores had a Specificity of 69.6%, 97.6% and 97.6% respectively in predicting acute severe pancreatitis. All the scores predicted significantly (p value 0.0001) the occurrence of a severe episode. Analyzing in between the scores none of the scores fared better than the other.

## *Conclusion*

C - reactive protein (CRP) of 150 mg/L at 48 hours of admission is an excellent predictor predicts acute severe pancreatitis. The BISAP, HAPS and SIRS scores on admission are also good markers to predict acute severe pancreatitis. All scores predict acute severe pancreatitis with equal efficacy.

**Key Words:** CRP, Pancreatitis, BISAP, HAPS, SIRS, Severe, Computerized Tomography